



Cooperating Technical Communities Guidance Document

July 1999

(Please check FEMA's website at http://www.fema.gov/mit/tsd/CTC_main.htm for updated versions of this guidance)

Background:

The FEMA flood mapping program has specific mandates within the Housing and Urban Development Acts of 1968 and 1969; the Flood Disaster Protection Act of 1973; and the National Flood Insurance Reform Act of 1994. These acts authorize FEMA to identify, publish, and update information with respect to all floodplain areas in the nation. FEMA complies with this mandate by publishing and updating flood maps for more than 18,000 communities.

Because flood conditions change over time due to natural and man-made changes in watersheds and floodplains, FEMA has an ongoing program to update the flood maps for floodprone communities. However, flood map update needs are increasing and Federal funding is limited, resulting in a significant portion of the 100,000-panel flood map inventory becoming outdated. Therefore, in 1997 FEMA designed a plan (<http://www.fema.gov/library/mapmod.pdf>) to modernize the inventory. Over time, the objective is to eliminate the existing backlog of outdated maps and to convert all the maps to a digital format.

One of the key objectives of the modernization plan is to increase local involvement in, and ownership of, the flood mapping process. Therefore, the Cooperating Technical Community (CTC) concept was developed. As technologies have increased dramatically, many states, regional agencies, and local communities have become increasingly sophisticated and have invested significant resources in flood hazard identification.

This document contains the initial guidance for the CTC initiative. It is envisioned that the initiative and this guidance will evolve as technologies and local capabilities grow.

Benefits of the CTC Initiative:

- By incorporating local knowledge and expertise, FEMA's National Flood Insurance Program flood hazard maps will be more accurate and can be updated faster;
- Local capabilities in hazard identification and risk assessment—the building blocks for disaster resistance—will be enhanced through FEMA technical assistance, experience, standards, and funding;
- The data, methods, and mapping used for local, regional, and state permitting processes will also be used for NFIP mapping, to the extent possible;
- Close coordination and involvement in the flood hazard mapping process will result in more efficient local floodplain management by the CTC partners;
- The initiative has the potential to interject a tailored, local focus into a national program where unique conditions may exist that necessitate special approaches to flood hazard identification.

Objectives of CTC initiative:

- To recognize the contributions that FEMA's partners (states, regional agencies and communities) make in assisting FEMA by providing timely and accurate flood hazard information.
- To maximize the use of these partners' contributions so that the limited Federal funding that is available can be leveraged to the fullest extent possible while maintaining consistent national standards.
- To fully integrate contributing partners into the mapping process, with the corresponding authorities and responsibilities.
- To provide training and technical assistance; and to facilitate mentoring for potential partners willing to develop the capability to participate as a CTC partner.

Administration:

- **Partnership Agreement**

CTC partner will enter into an overall partnership agreement (CTC agreement) with the appropriate FEMA Regional Mitigation Division. The Partnership Agreement is a broad statement of principle, emphasizing the value of the NFIP's three components of insurance, floodplain management, and mapping. It recognizes the fundamental importance of flood hazard identification in the successful reduction of future flood losses, and the partner's commitment to the effort. The Partnership Agreement is a prerequisite to any further CTC activities. As the CTC partner and FEMA identify specific tasks to undertake, Mapping Activity Agreements will be developed and entered into under the umbrella of the overall CTC Partnership Agreement.

- **Mapping Activity Agreements:**

Mapping Activity Agreements will be collaborative efforts where both the CTC partner and FEMA contribute data and units of work to maximize the extent, accuracy, and utility of flood studies to best meet local and Federal needs, while minimizing costs for all parties. Unless Congress allocates supplemental map modernization funding, Federal funding will be limited. In any event, FEMA funding may be allocated through a cooperative agreement and within the context of FEMA's flood study prioritization process. The Mapping Activity Agreements may also transfer certain responsibilities to the partner. The work addressed by Mapping Activity Agreements may be locally-funded and/or FEMA-funded.

Scope of Effort:

Mapping Activity Agreements will support the development of flood hazard mapping or a component of the production and maintenance of flood hazard mapping. FEMA and the CTC partner will collaborate on these mapping activities. FEMA may provide technical assistance, support, and/or data to the CTC partner. In some cases, funding may also be available. The following mapping activities may receive funding in Fiscal Year 1999 through a cooperative agreement with FEMA:

<u>ACTIVITY</u>	<u>PARTNER</u>	<u>DESCRIPTION</u>
Refinement of Approximate Zone A Boundaries	Community/ Regional/State Agency	The CTC partner works with FEMA to perform analyses to refine Zone A boundaries. Emphasis placed on automation techniques.
Hydrologic & Hydraulic Modeling and Floodplain Mapping	Community/ Regional/State Agency	The CTC partner develops digital engineering data and floodplain mapping using GIS-based or traditional H&H modeling.
DFIRM Preparation	Community/ Regional/State Agency	The CTC partner digitizes the effective FIRM into a DFIRM.
Redelineation of Detailed Flood Hazard Information Using Updated Topographic Data	Community/ Regional/State Agency	The CTC partner redelineates the effective flood hazard information using more up-to-date topographic data. GIS is used, where available.
Analysis of Community Mapping Needs to support FEMA's Mapping Needs Update Support System (MNUSS)	Regional/State Agency	The CTC partner performs a detailed community-by-community investigation and assessment of every NFIP community's mapping needs, including flood data updates, map maintenance, and includes unmapped communities.

While no funding will be provided to CTC partners for the following mapping activities, FEMA may provide technical assistance, support, and/or data to the CTC partner:

ACTIVITY	PARTNER	DESCRIPTION
Base Map Inventory	Regional or State Agency	The CTC partner performs an investigation and provides an inventory of base maps meeting FEMA's specifications for NFIP communities in the state.
Digital Base Map Data Sharing	Community/ Regional/ State Agency	The CTC partner supplies a base map for DFIRM production. The base map will comply with FEMA's minimum accuracy requirements and be distributable by FEMA to the public (hardcopy and electronic formats).
DFIRM Maintenance	Community/ Regional/State Agency	The CTC partner assumes responsibility for long-term, periodic maintenance of the DFIRM.
Hydrologic and Hydraulic Review Agreement	Community/ Regional/State Agency	The CTC partner evaluates H&H studies prepared for flood data updates and/or 44 CFR Part 65 map revisions. The review will focus on compliance with the technical and regulatory requirements contained in FEMA's various flood mapping guidelines and specifications, the pertinent NFIP flood mapping regulations, as well as standard accepted engineering practices.
Technical Standards Agreement	Community/ Regional/State Agency	Adoption of specific technical standards or processes appropriate for local conditions for NFIP flood mapping purposes.

Eligibility Criteria:

The cooperative agreements (CAs) awarded in this effort are intended to supplement and not supplant, on-going mapping efforts by the community, regional agency, or state. The FEMA funds would be in addition to the partner's current effort. This is the first year of this initiative and the FEMA Regional Offices have selected pilot communities based on the following criteria:

- 1) The CTC partner must have existing processes and/or systems in place that support mapping or data collection activities that contribute to flood hazard identification. These ongoing processes and/or systems must be supported by non-federal funding.
- 2) The CTC partner must have demonstrated the capability to perform the mapping activities for which it is applying.
- 3) The CTC partner must be a community participating in the NFIP, and be in good standing in the program as determined by the FEMA Regional Office, or be a State or regional agency that serves communities that participate in the NFIP.

This criteria, which has been used in this pilot year, will be evaluated by FEMA and further enhanced in subsequent years. In addition to the above selection criteria, communities that receive a CA must be able to perform the financial management activities required as part of the cooperative agreement (i.e. account for federal funds, prepare financial reports). FEMA regional offices will assist the communities with these financial management activities.

Technical Capabilities:

A CTC partner must have in-house staff capabilities in the appropriate technical area for the given activity. If a portion of the activities is contracted, the CTC partner must have in-house staff capability to monitor the contractor and approve the products. For these purposes, “capability” means demonstrated experience in the performance of, or management through contracting of, similar activities. Specific criteria to determine partner capabilities for specific mapping activities are currently being developed.

Contracting:

Contractors used by the CTC partner, if any, for FEMA-funded activities must meet the requirements of 44CFR Part 13, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments. Within Part 13, §13.36 covers procurement standards. If desired, FEMA will provide assistance on developing selection criteria for contracted tasks. All work must meet the certification requirements described below.

Standards:

Unless otherwise indicated in specific Mapping Activity Agreements, all flood hazard identification activities will be accomplished according to the relevant portions of 44CFR Parts 59-77, as well as the technical standards contained in FEMA’s Guidelines and Specifications for Study Contractors (FEMA 37) dated 1/95 and FEMA’s Guidelines and Specifications for Flood Map Production Coordination Contractors dated 2/17/99, and all subsequent revision to these documents.

Certification:

All data generated under CTC Mapping Activity Agreements must meet the applicable certification requirements as indicated in 44CFR, Part 65, Identification and Mapping of Special Hazard Areas.

State Role:

The role filled by a State will be a function of its authorities and capabilities. Some states have active floodplain mapping programs and others review map revisions as part of their regulatory programs. As with the options available to communities, interested States will be expected to have in-house staff capabilities to fulfill the CTC activity it would like to perform. States that do not participate as a CTC will continue the traditional functions of the State Coordinating Office as they relate to any activities performed by CTCs in that State.

The activities that a State might perform are the same as those identified for communities, with the addition of collection and assessment of community mapping needs (MNUSS), and a basemap inventory.

Funding:

CTC activities may be funded based on FEMA's priority of mapping needs and the availability of FEMA funds for mapping. If FEMA funds are provided, the CTC partner will receive funds through a cooperative agreement.

Grants Management:

FEMA-funded activities must meet the requirements of 44CFR Part 13, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

Additional FEMA Assistance:

FEMA plans to offer an array of technical and programmatic assistance to its CTC partners. Such assistance resources include:

- Archived support data are available from FEMA's Mapping Coordination Contractors (MCC)/Technical Evaluation Contractors (TEC). Available information includes:
 - √ Copies of FEMA-issued Letters of Map Change (LOMC)
 - √ Engineering and mapping Flood Insurance Study backup data
 - √ Data collected as part of the Five-Year Mapping Needs Assessment
 - √ FEMA's rule-based engineering software packages such as CHECK-2, CHECK-RAS, FISPLOT, and RASPLOT
- Training courses will offered through FEMA's Emergency Management Institute, and may be offered at other locations under some circumstances. In FY 2000, the following topics relevant to CTCs are planned:
 - √ Digital hazard data, including DFIRMs and Q3s
 - √ FEMA software
 - √ Coastal Theory and Mapping
 - √ GIS and Advanced Mapping Technology
 - √ NFIP Map Revisions and Amendments
 - √ Remote Sensing for Flood Studies
 - √ Study contractor workshops
- Specific technical and programmatic support, such as peer review, modeling guidance, base map selection, and/or tailored training, may be provided through FEMA's MCCs(TECs).

- General technical and programmatic information regarding the National Flood Insurance Program and FEMA's flood hazard mapping program can be downloaded from FEMA's Flood Hazard Mapping website.

Program Management

FEMA Regional Offices will manage the CTC agreements. Listed below is FEMA Region 10's Cooperating Technical Community Coordinator:

Region 10: (Alaska, Idaho, Oregon, Washington), Larry Basich, Federal Regional Center, 130 228th Street, Bothell, WA 98021, Telephone: (425) 487-4703.